DSCR

DLA's Lead Center For Aviation Support

ENVIRONMENTAL RESTORATION PROGRAM

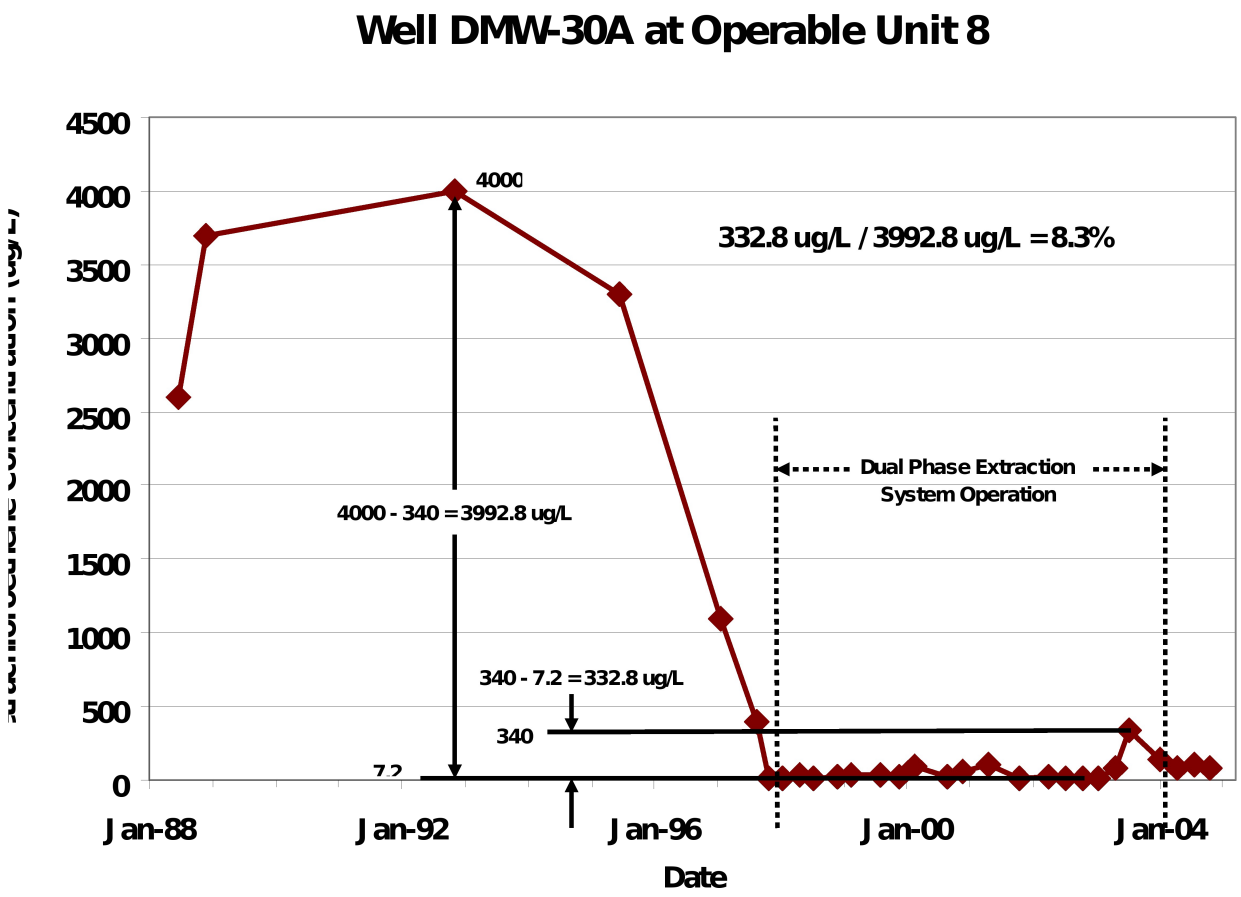
Restoration Advisory Board Issues 9.10, 9.11, and 9.12

Restoration Advisory Board Meeting
18 October 2005

Groundwater Sampling Frequency

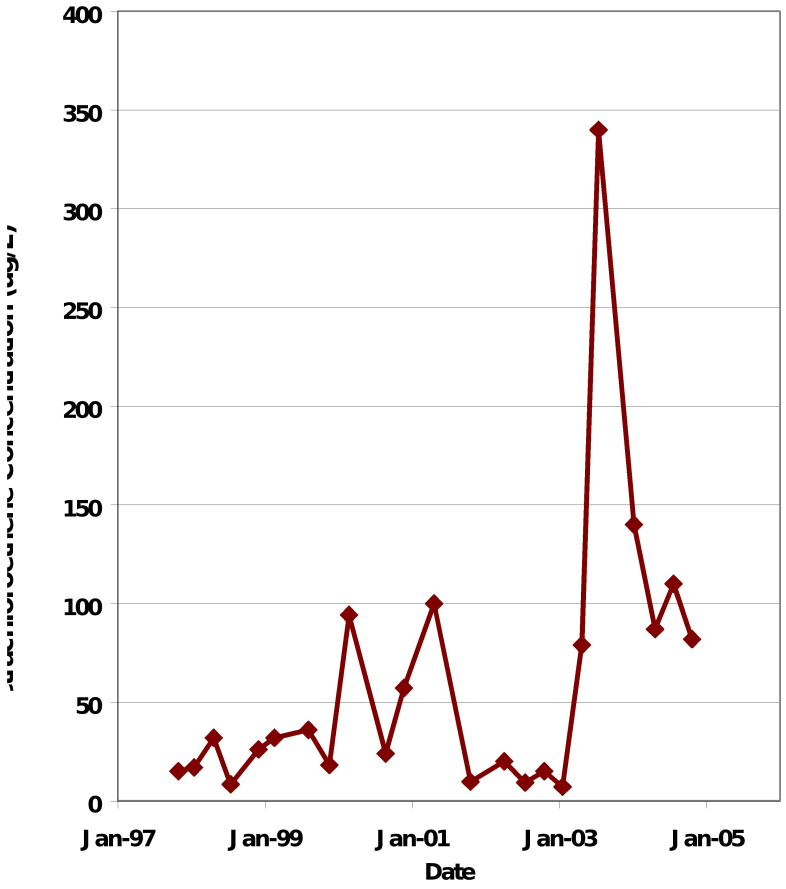
- **Sufficient to Indicate Changes in Constituent Concentrations**
- **Since 1987 Sampling Indicates that Concentrations Change in Years, Not Months**
- **Changed from Quarterly to Biannual in July 2005**
- **Changes in Concentrations Can Be Detected Biannually as Well as Quarterly**
- **Well DMW-30A Illustrates How Biannual Sampling Will Indicate Concentration Changes**

Groundwater Sampling Frequency Changes in Constituent Concentrations

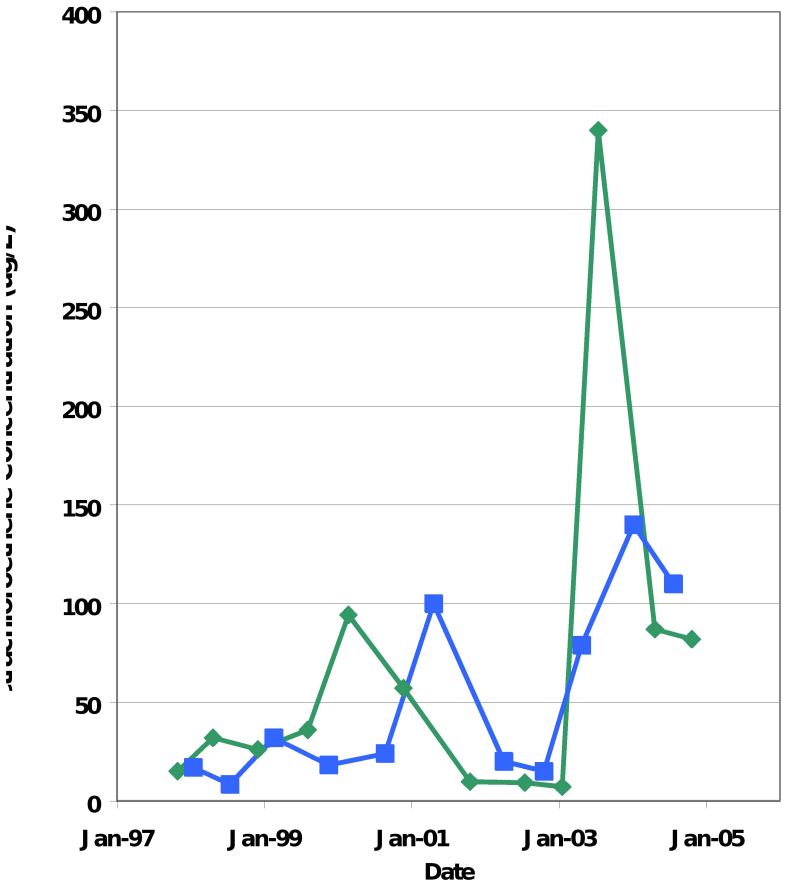


Groundwater Sampling Frequency Quarterly versus Biannual

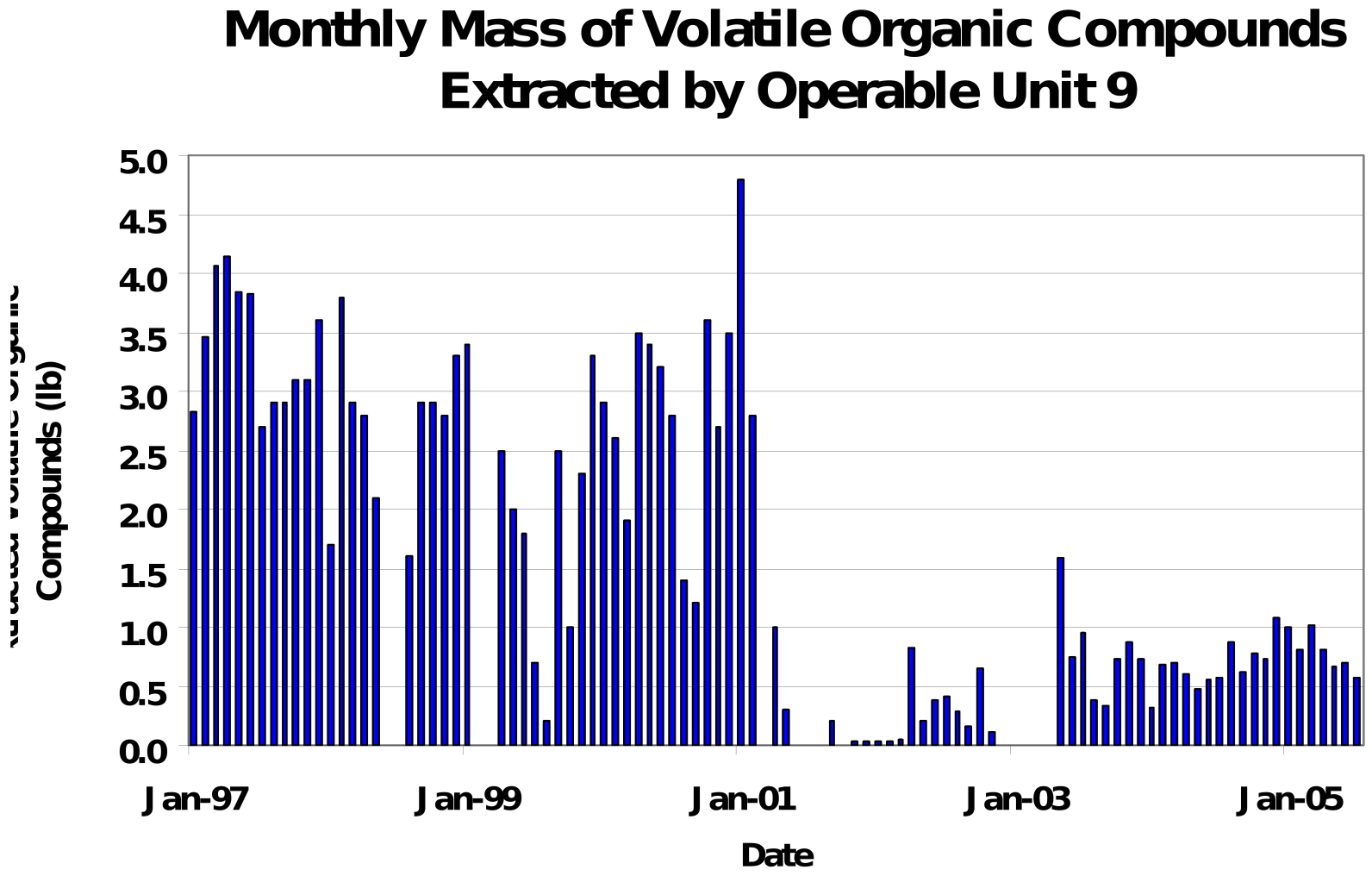
Quarterly Groundwater Sampling of Well DMW-30A



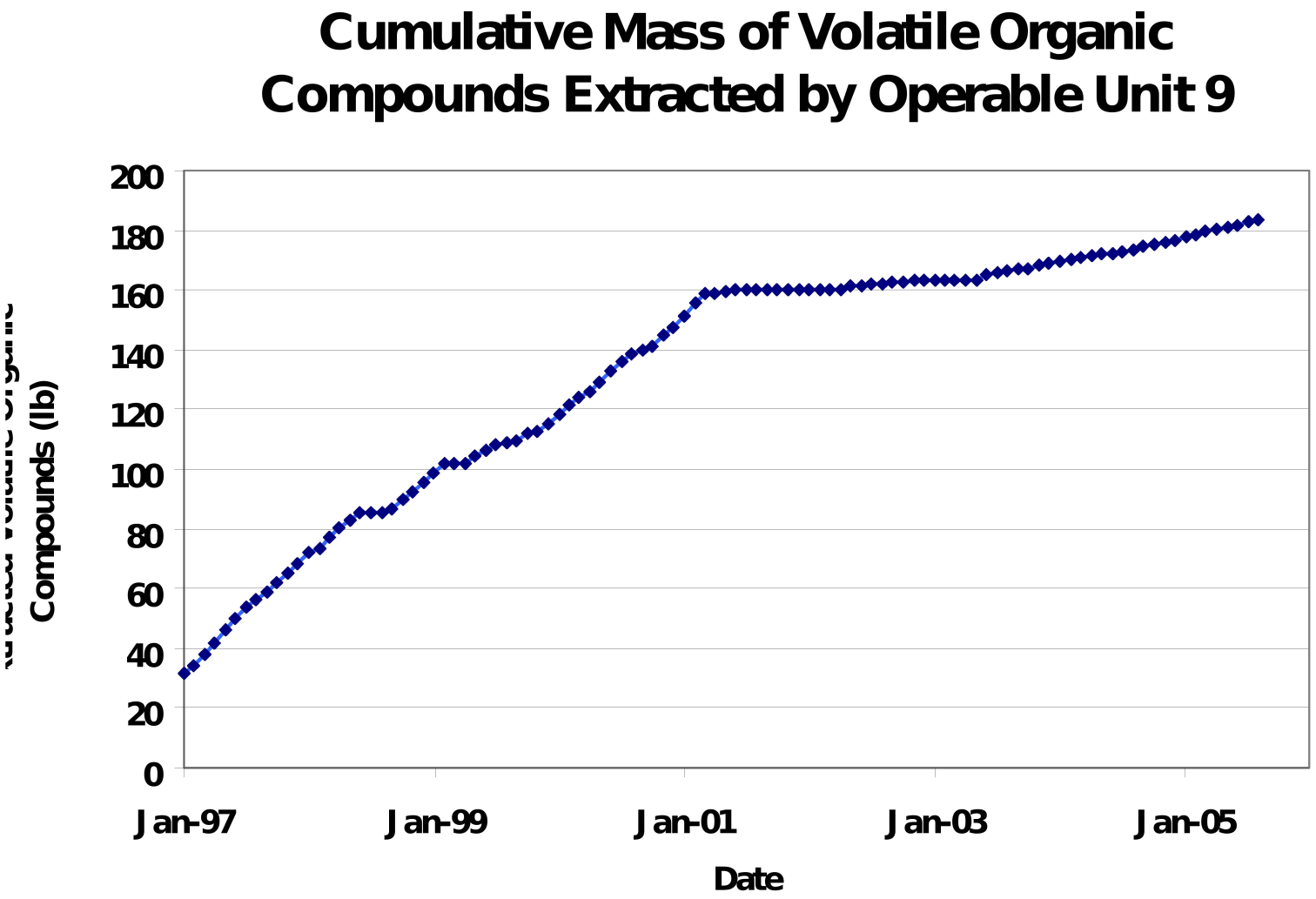
Biannual Groundwater Sampling of Well DMW-30A



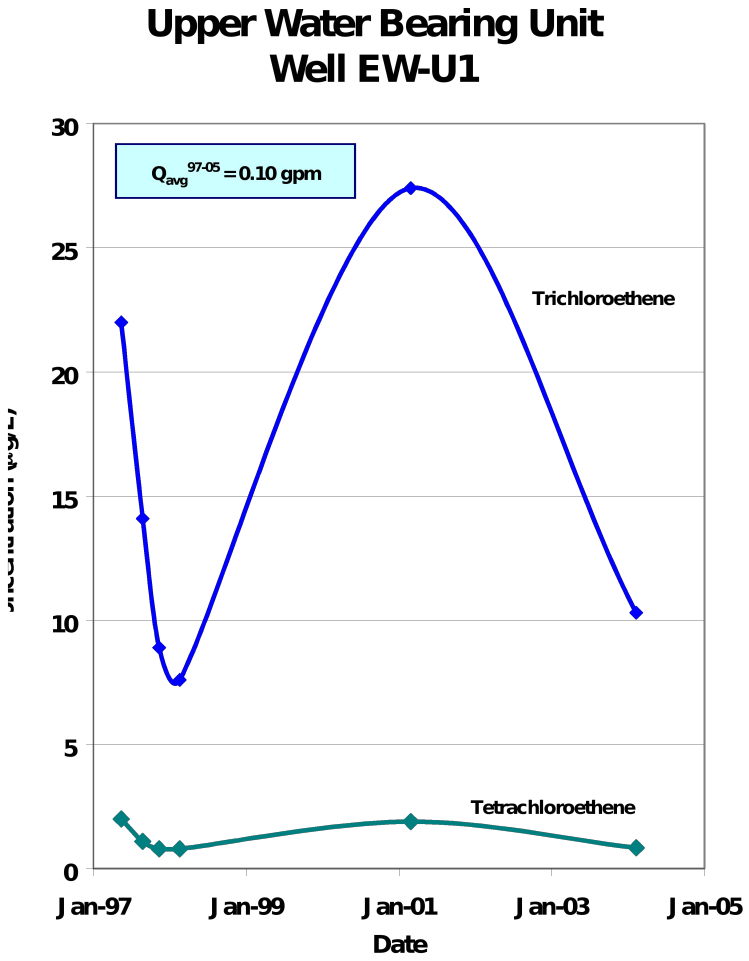
Monthly Contaminant Recovery Operable Unit 9

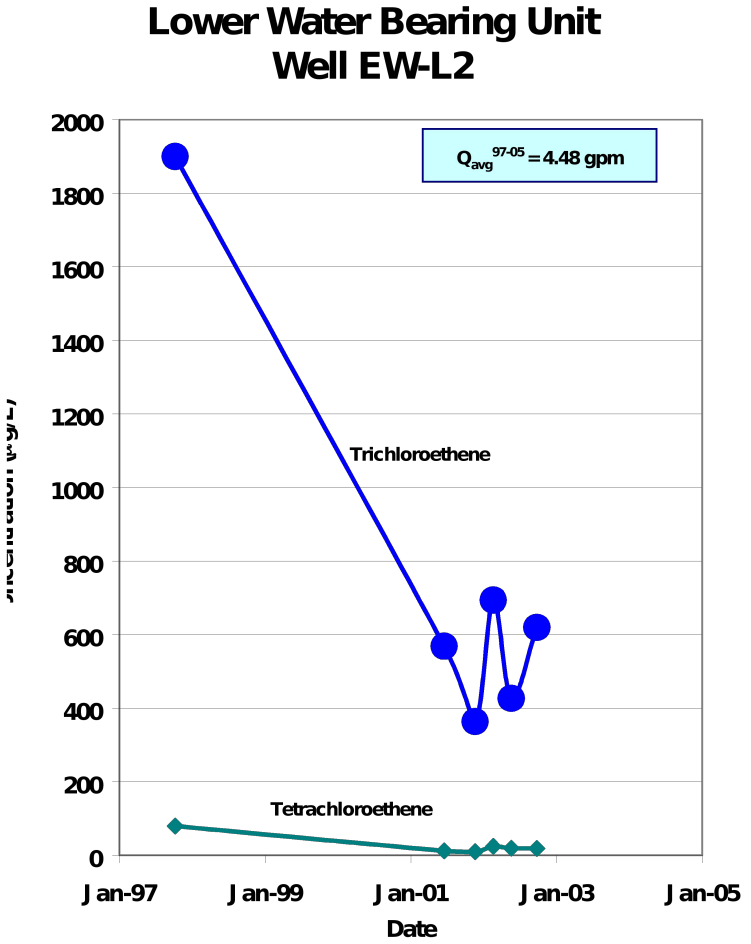


Trend of Contaminant Recovery Operable Unit 9



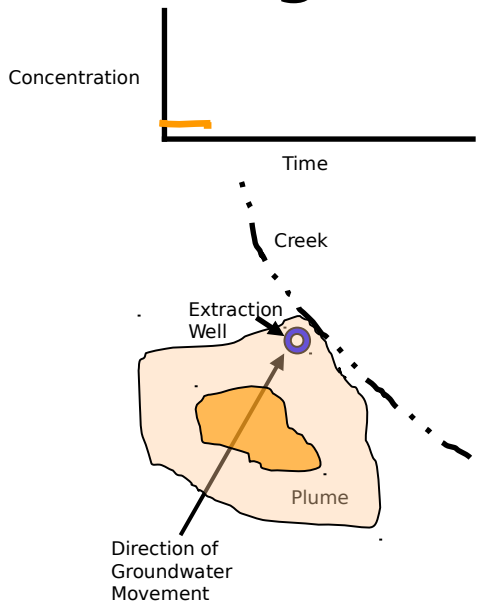
Contaminant Concentration Trends in Operable Unit 9 Extraction Wells



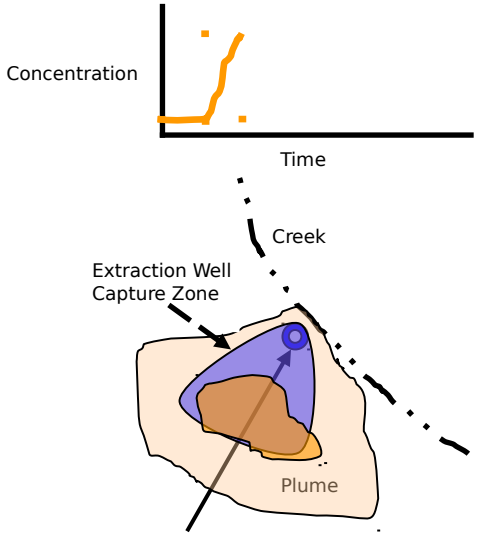


Development of Extraction Well Capture Zone Upper Water Bearing Unit

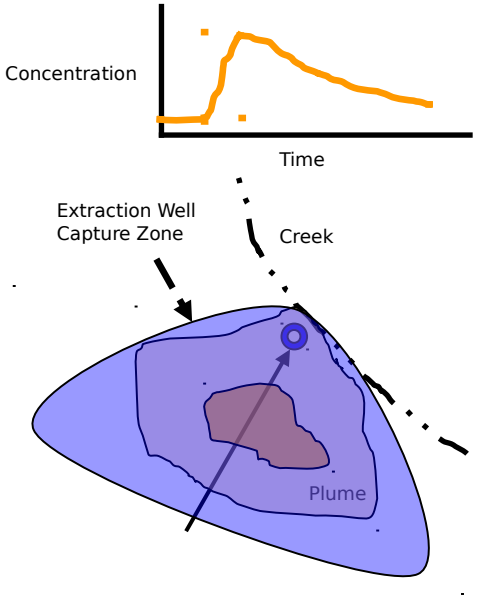
Before Pumping



Short-Term Pumping



Long-Term Pumping



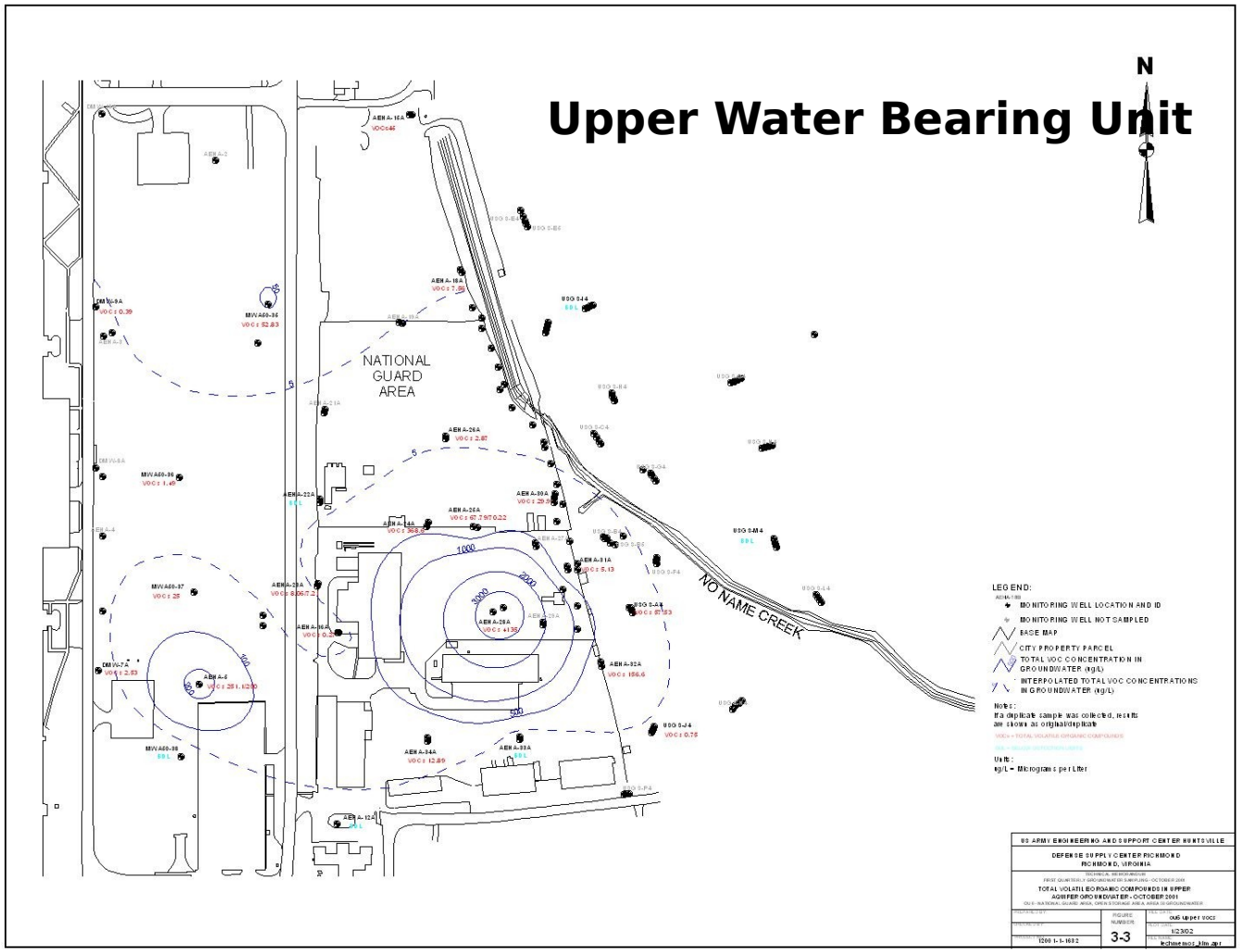
OU 6 Plumes Were Delineated in Reports and Presentations

- **June 2000 Natural Attenuation Studies Report (Administrative Record Document No. 486)**
- **February 2002 Technical Memorandum on First Quarterly Groundwater Sampling (Document No. 607)**
- **December 2002 Technical Memorandum on Groundwater Sampling (Document No. 655)**
- **March 2003 Technical Memorandum on Groundwater Sampling (Document No. 691)**

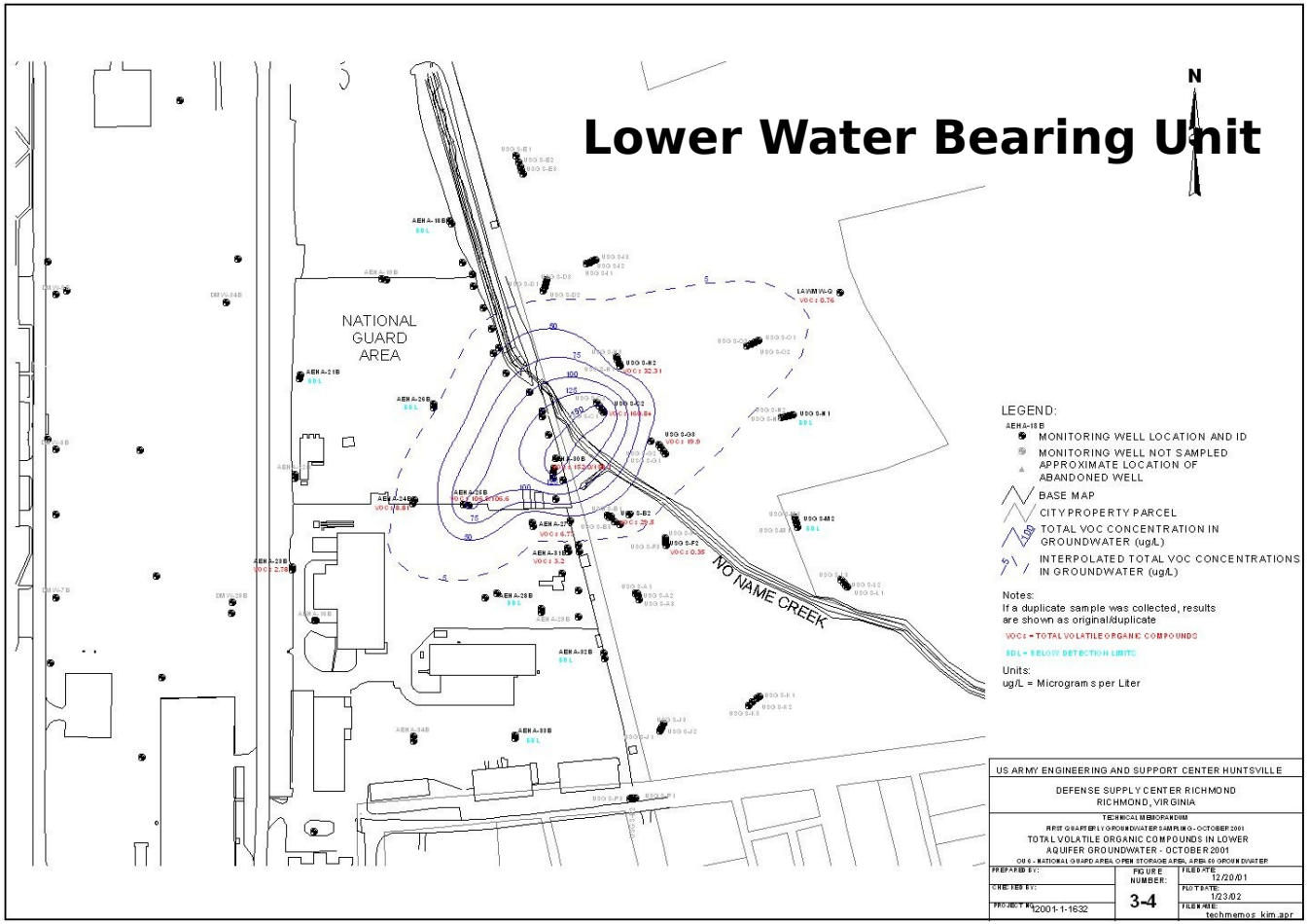
OU 6 Plumes Were Delineated in Reports and Presentations

- **January 2003 Summary of Findings (Document No. 658)**
- **13 January 2003 Restoration Advisory Board Meeting (Document No. 659)**
- **March 2004 Technical Memorandum on Groundwater Sampling (Document No. 751)**

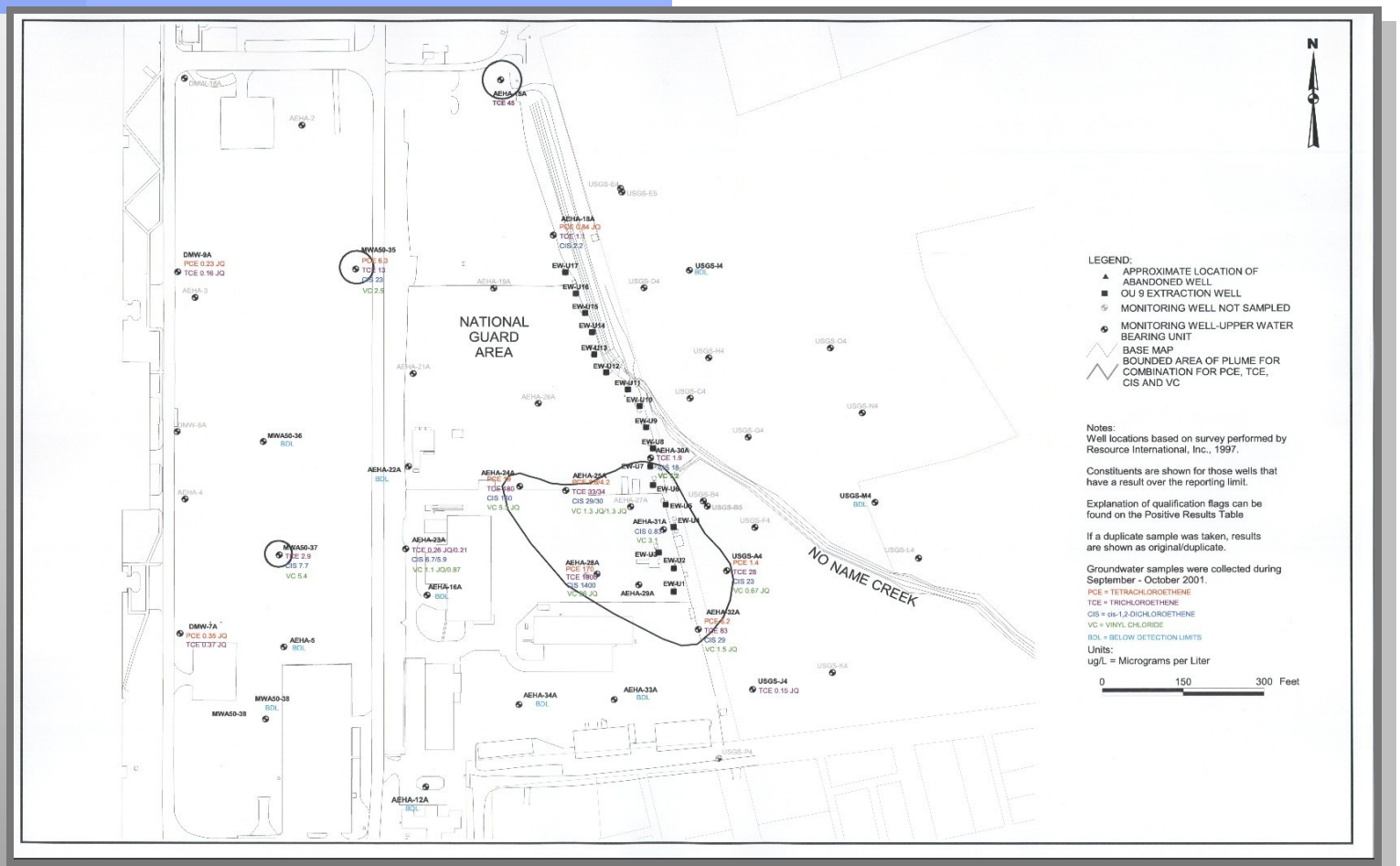
First Quarterly Groundwater Sampling (February 2002)


Upper Water Bearing Unit
N
NATIONAL GUARD AREA
NO NAME CREEK
LEGEND:
MONITORING WELL LOCATION AND ID
MONITORING WELL NOT SAMPLED
BASE MAP
CITY PROPERTY PARCEL
TOTAL VOC CONCENTRATION IN GROUNDWATER (ug/L)
INTERPOLATED TOTAL VOC CONCENTRATIONS IN GROUNDWATER (ug/L)
Notes:
If a duplicate sample was collected, results are shown as original/duplicate
Units:
ug/L - Micrograms per Liter
US ARMY ENGINEERING AND SUPPORT CENTER HUNTSVILLE
DEFENSE SUPPLY CENTER RICHMOND
RICHMOND, VIRGINIA
TOTAL VOLATILE ORGANIC COMPOUNDS IN UPPER AQUIFER GROUNDWATER - OCTOBER 2001
3-3

First Quarterly Groundwater Sampling (February 2002)

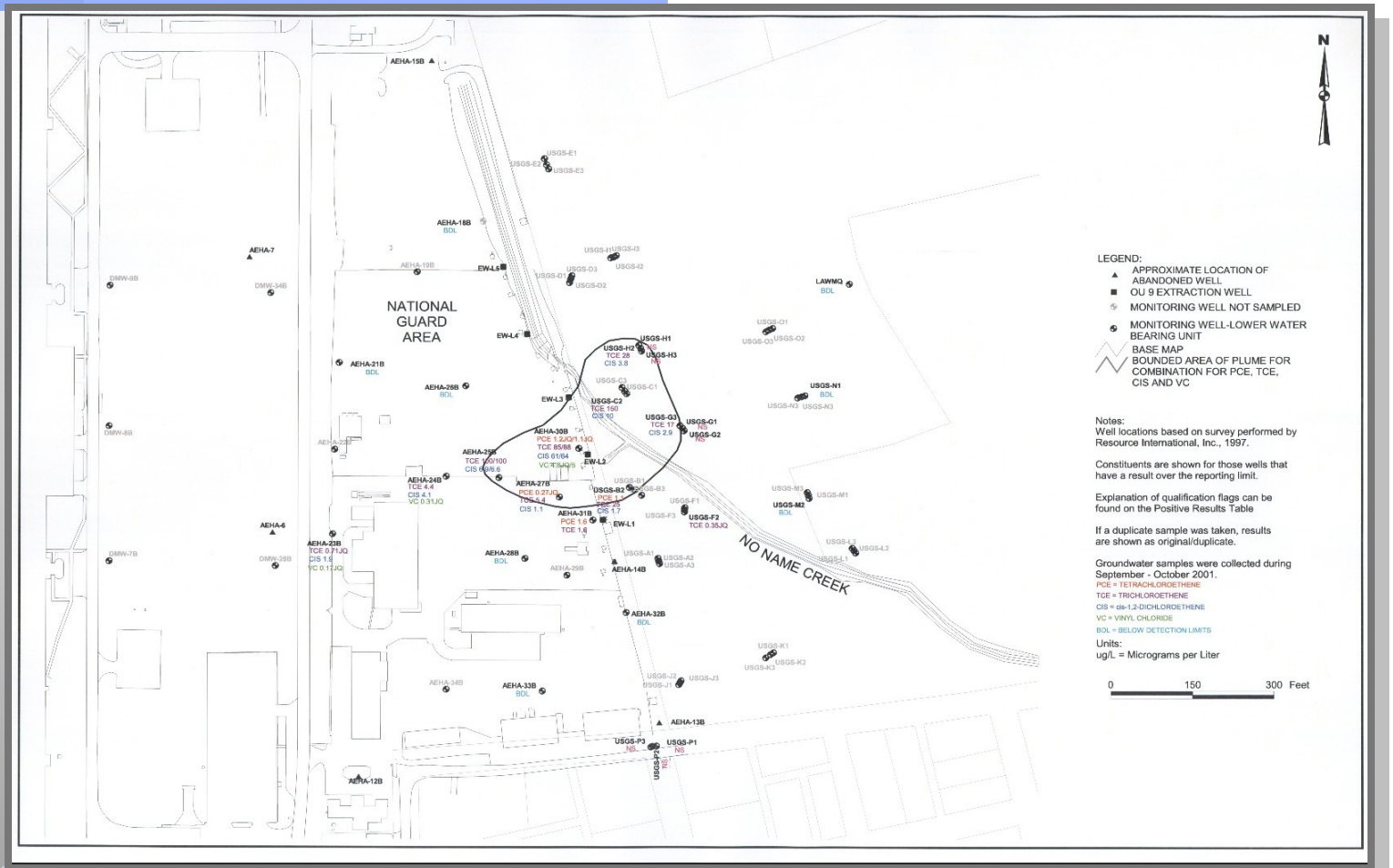

Lower Water Bearing Unit
N
NATIONAL GUARD AREA
NO NAME CREEK
LEGEND:
MONITORING WELL LOCATION AND ID
MONITORING WELL NOT SAMPLED APPROXIMATE LOCATION OF ABANDONED WELL
BASE MAP
CITY PROPERTY PARCEL
TOTAL VOC CONCENTRATION IN GROUNDWATER (ug/L)
INTERPOLATED TOTAL VOC CONCENTRATIONS IN GROUNDWATER (ug/L)
Notes:
If a duplicate sample was collected, results are shown as original/duplicate
VOCs = TOTAL VOLATILE ORGANIC COMPOUNDS
SDL = SELOW DETECTION LIMITS
Units:
ug/L = Micrograms per Liter
US ARMY ENGINEERING AND SUPPORT CENTER HUNTSVILLE
DEFENSE SUPPLY CENTER RICHMOND
RICHMOND, VIRGINIA
TECHNICAL MEMORANDUM
FIRST QUARTERLY GROUNDWATER SAMPLING - OCTOBER 2001
TOTAL VOLATILE ORGANIC COMPOUNDS IN LOWER AQUIFER GROUNDWATER - OCTOBER 2001
OU 6 - NATIONAL GUARD AREA, OPEN STORAGE AREA, AREA 69 GROUNDWATER
PREPARED BY:
CHECKED BY:
PROJECT NO. 2001-1-1632
FIGURE NUMBER: 3-4
FILED ATE: 12/20/01
PLOT DATE: 1/23/02
FILE NAME: techmemos kim.apr

Quarterly OU 6 Groundwater Sampling October 2001 (upper aquifer)


NATIONAL GUARD AREA
NO NAME CREEK
N
LEGEND:
APPROXIMATE LOCATION OF ABANDONED WELL
OU 9 EXTRACTION WELL
MONITORING WELL NOT SAMPLED
MONITORING WELL-UPPER WATER BEARING UNIT
BASE MAP
BOUNDED AREA OF PLUME FOR COMBINATION FOR PCE, TCE, CIS AND VC
Notes:
Well locations based on survey performed by Resource International, Inc., 1997.
Constituents are shown for those wells that have a result over the reporting limit.
Explanation of qualification flags can be found on the Positive Results Table
If a duplicate sample was taken, results are shown as original/duplicate.
Groundwater samples were collected during September - October 2001.
PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
CIS = cis-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
BDL = BELOW DETECTION LIMITS
Units:
ug/L = Micrograms per Liter
0
150
300 Feet

(From the 13 January 2003 Restoration Advisory Board Meeting)

Quarterly OU 6 Groundwater Sampling October 2001 (lower aquifer)


NATIONAL GUARD AREA
NO NAME CREEK
N
LEGEND:
APPROXIMATE LOCATION OF ABANDONED WELL
OU 9 EXTRACTION WELL
MONITORING WELL NOT SAMPLED
MONITORING WELL-LOWER WATER BEARING UNIT
BASE MAP
BOUNDED AREA OF PLUME FOR COMBINATION FOR PCE, TCE, CIS AND VC
Notes:
Well locations based on survey performed by Resource International, Inc., 1997.
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BDL = BELOW DETECTION LIMITS
Units:
ug/L = Micrograms per Liter
0
150
300 Feet